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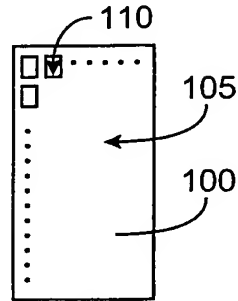


FIG. 1A

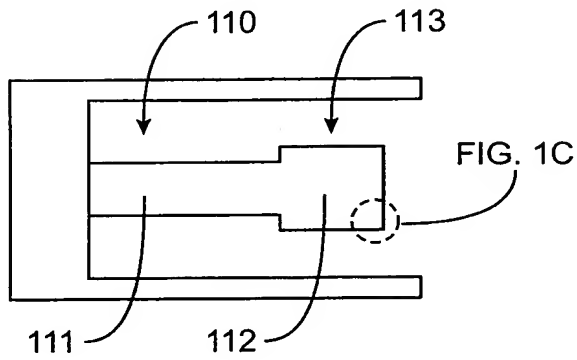


FIG. 1B

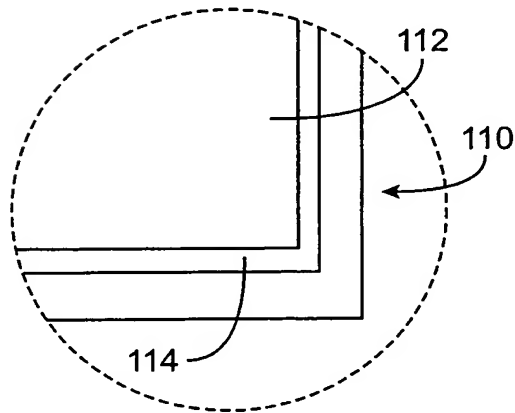


FIG. 1C

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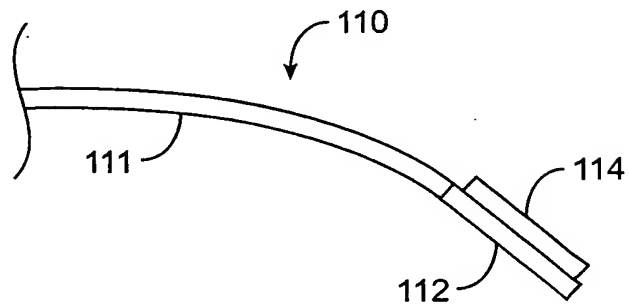


FIG. 1D

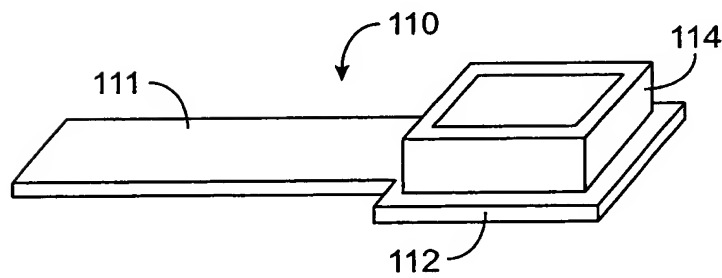


FIG. 1E

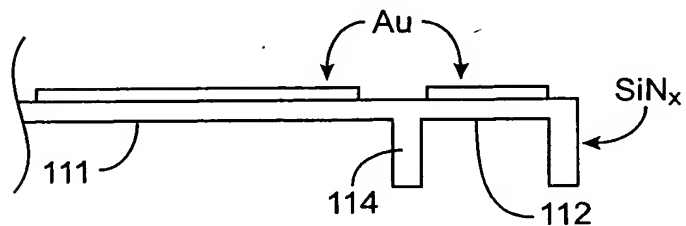


FIG. 1F

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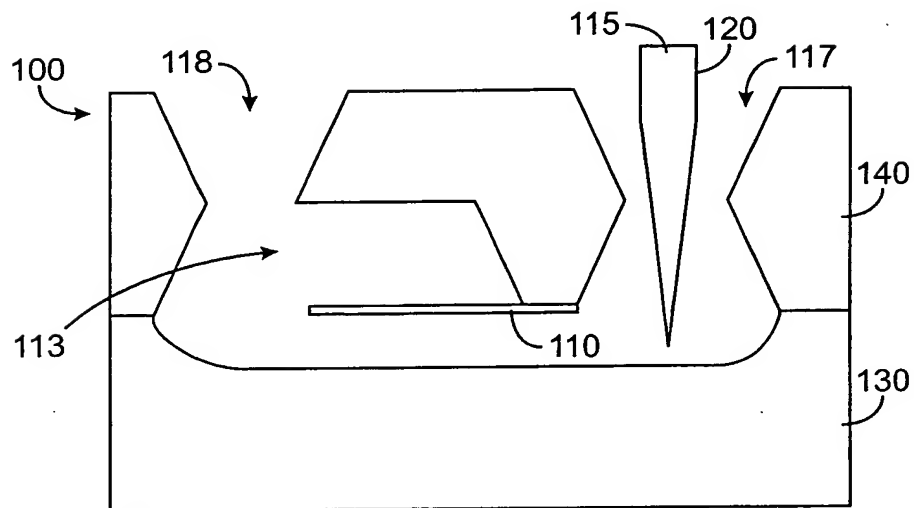


FIG. 1G

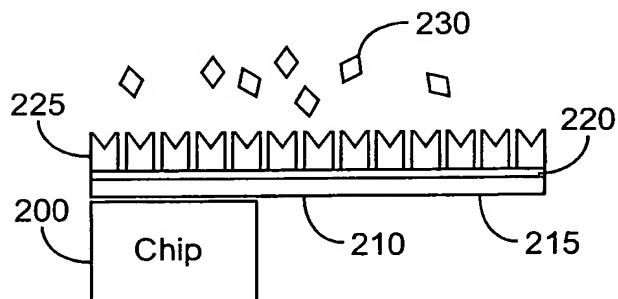


FIG. 2A

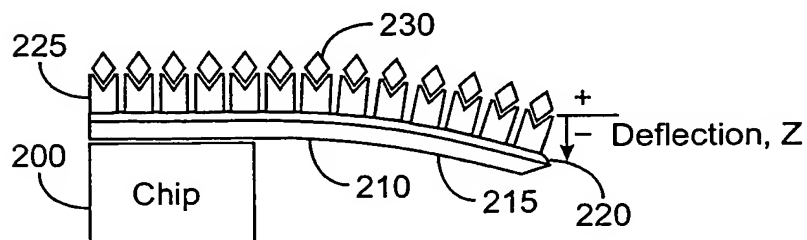


FIG. 2B

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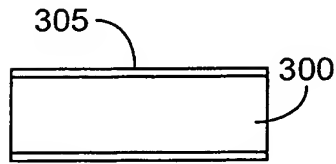


FIG. 3A

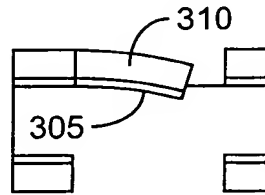


FIG. 3D

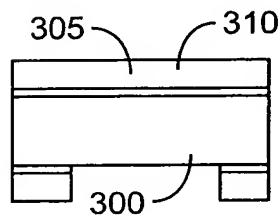


FIG. 3B

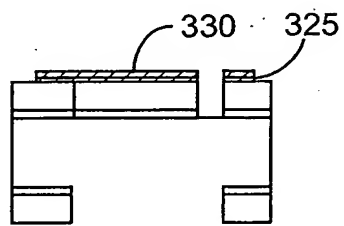


FIG. 3E

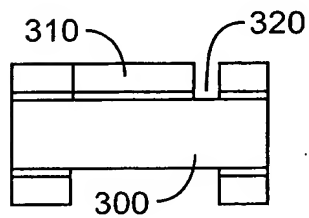


FIG. 3C

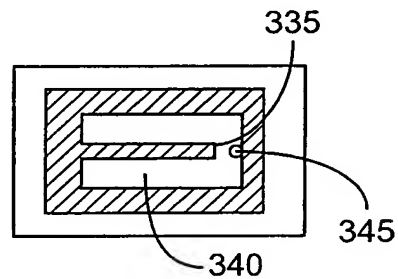


FIG. 3F

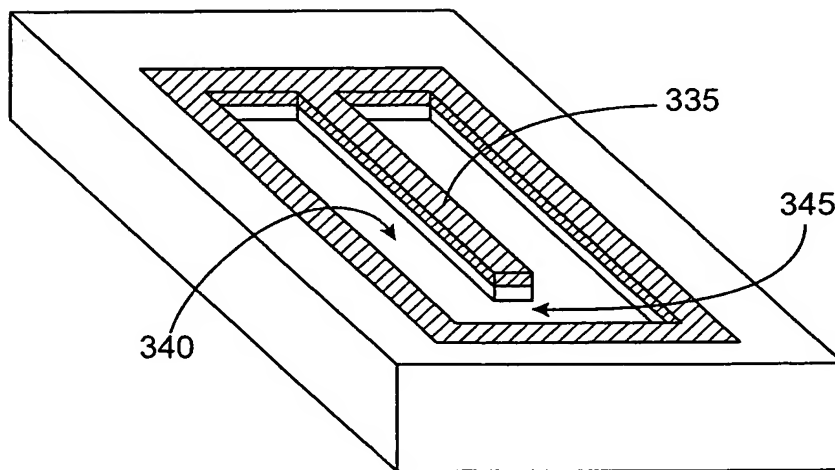


FIG. 3G

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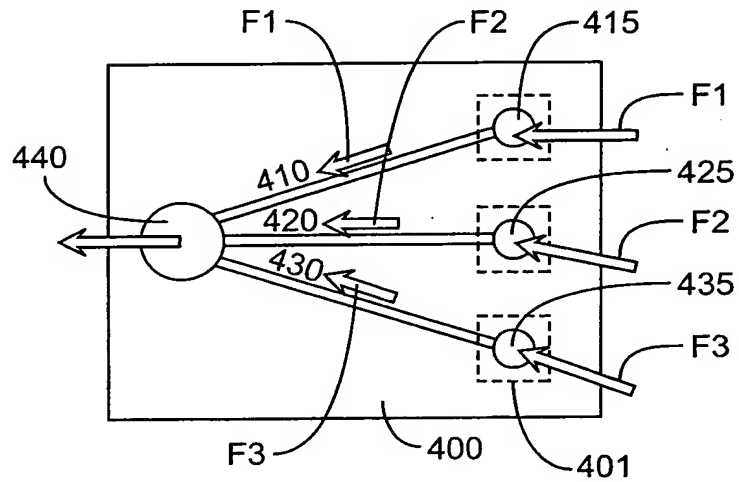


FIG. 4A

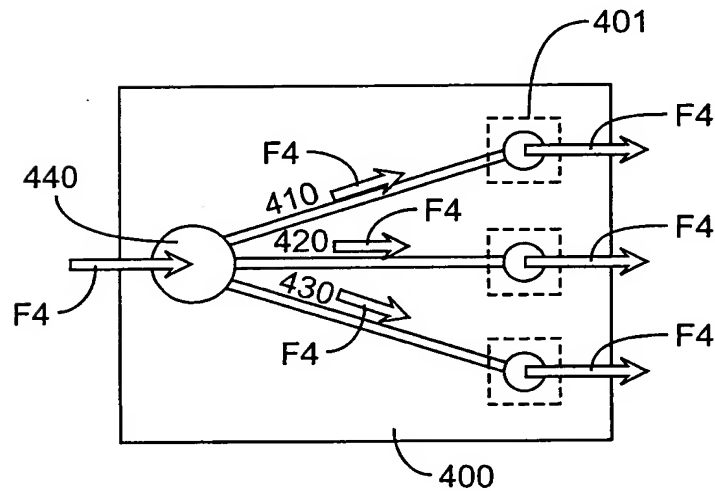


FIG. 4B

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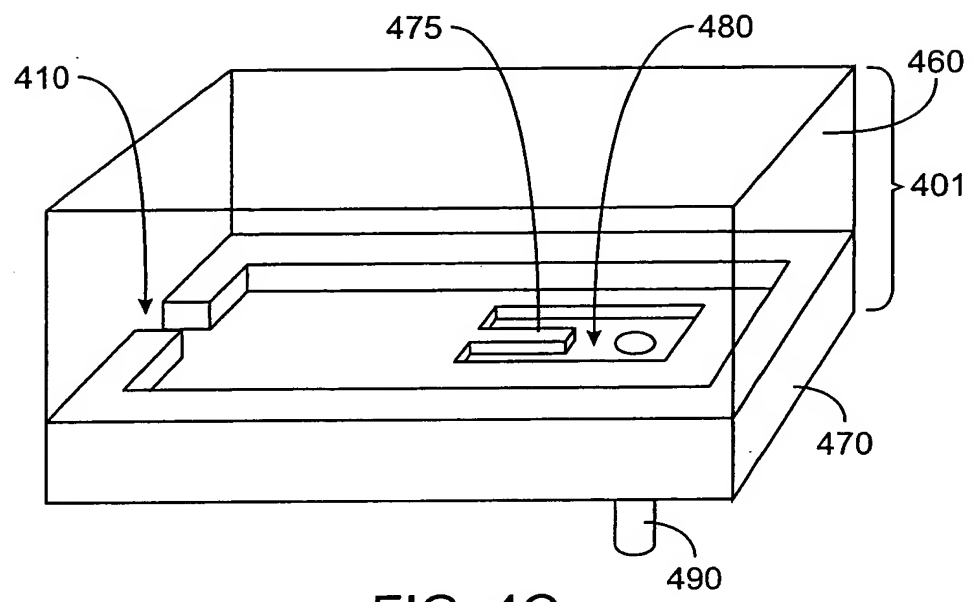


FIG. 4C

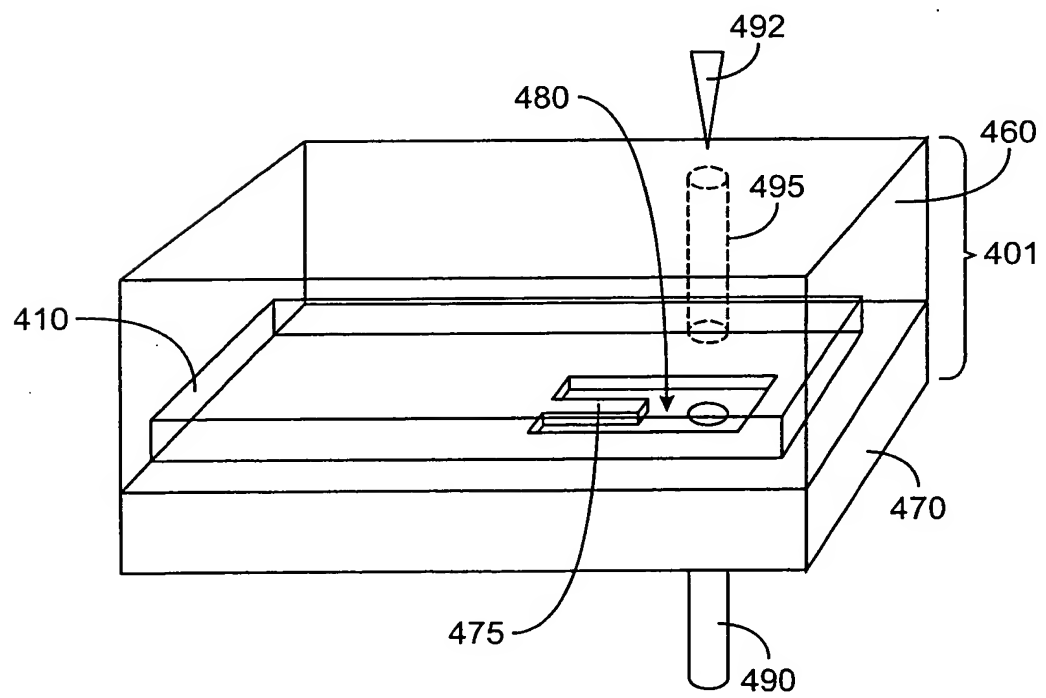


FIG. 4D

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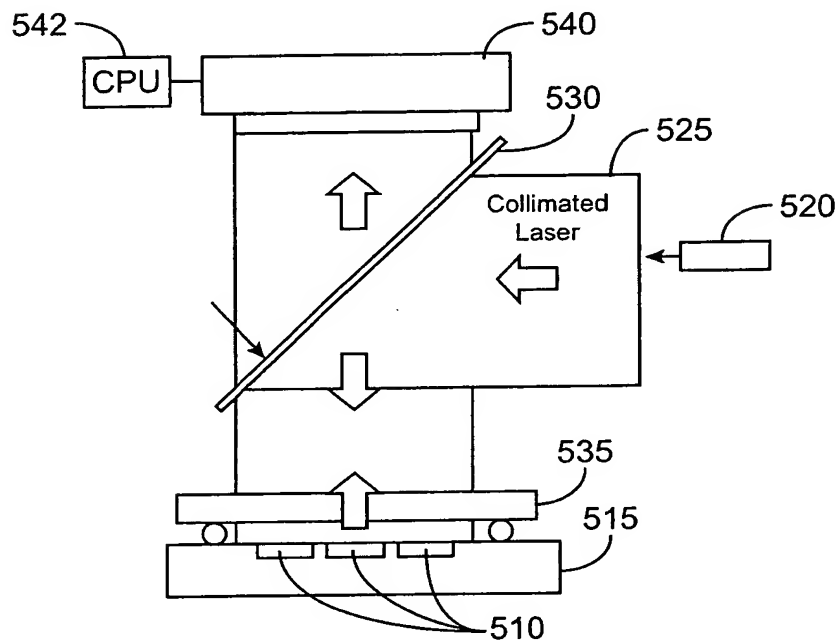


FIG. 5A

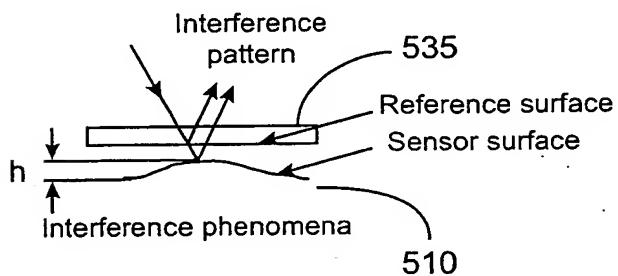


FIG. 5B

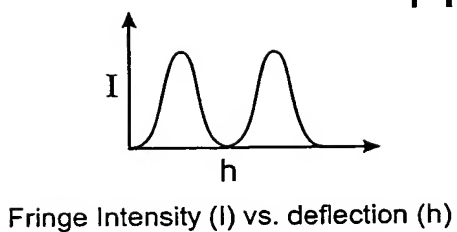


FIG. 5C

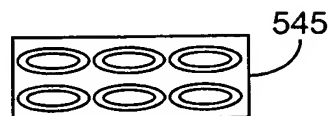


FIG. 5D

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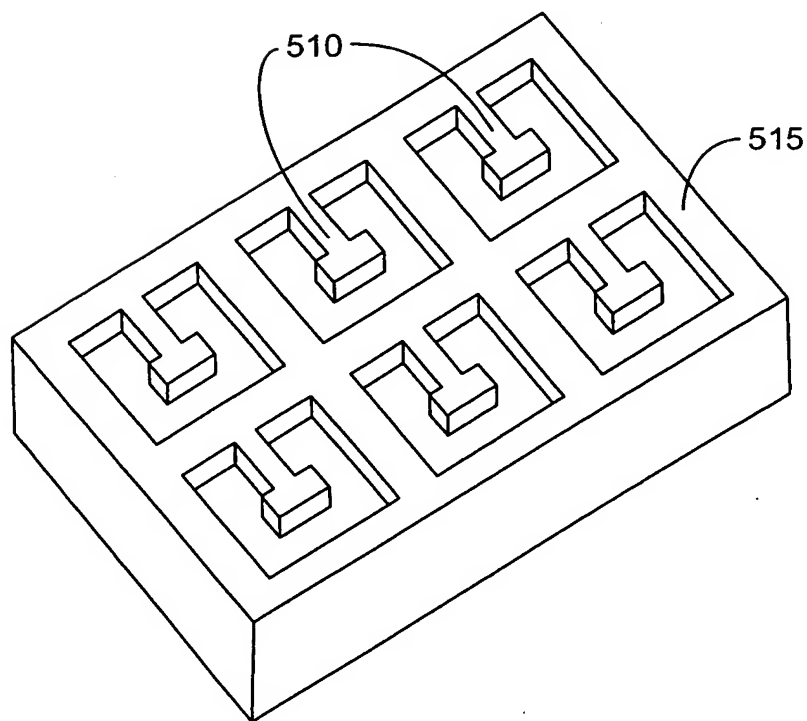
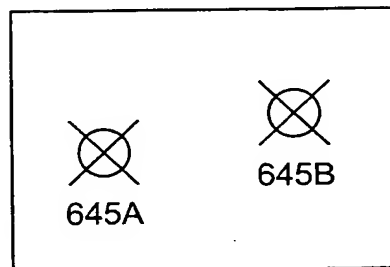
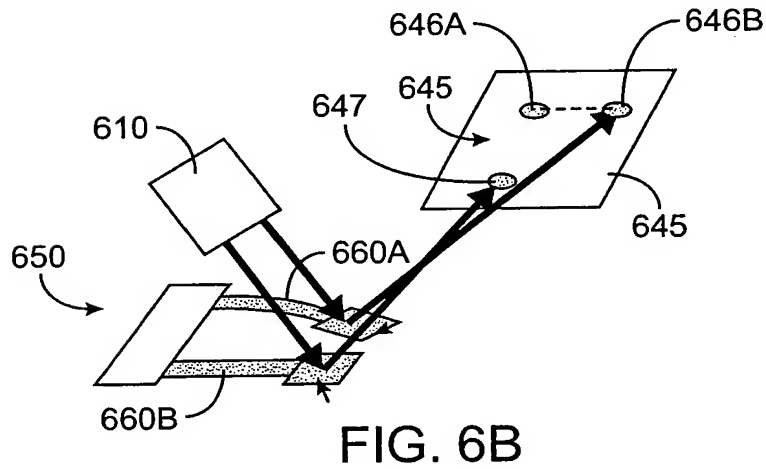
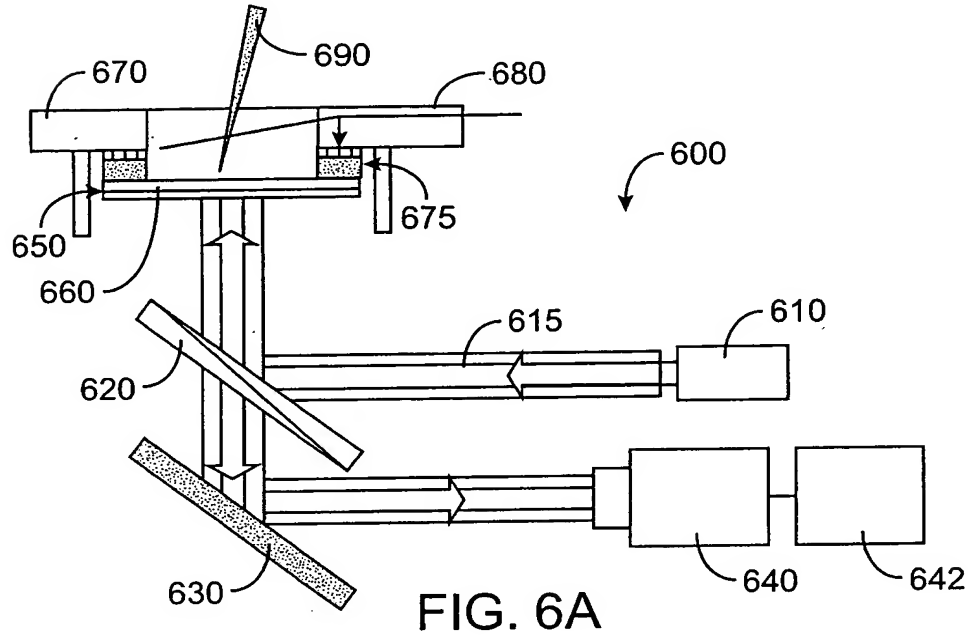


FIG. 5E

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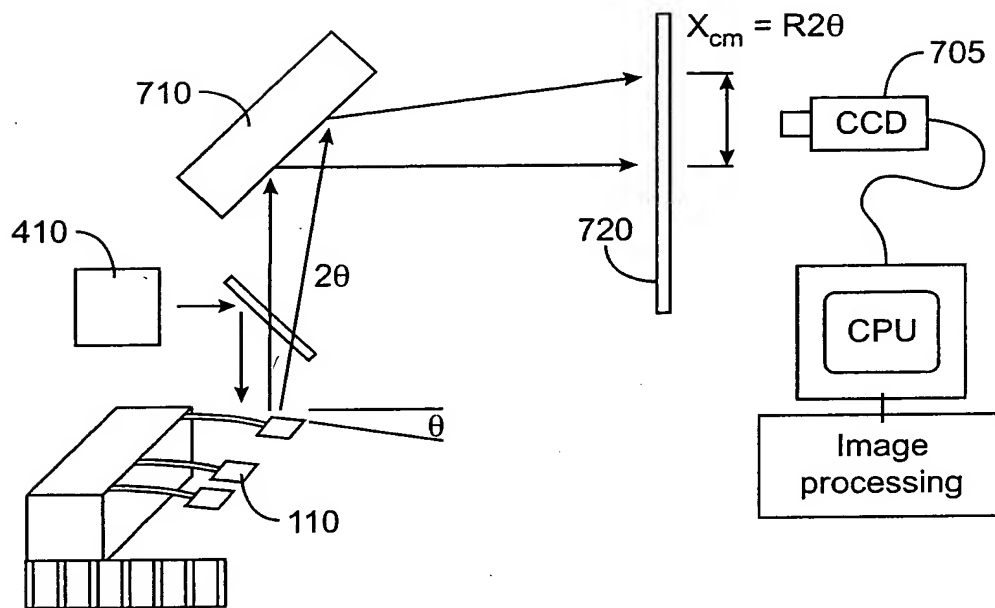


FIG. 7

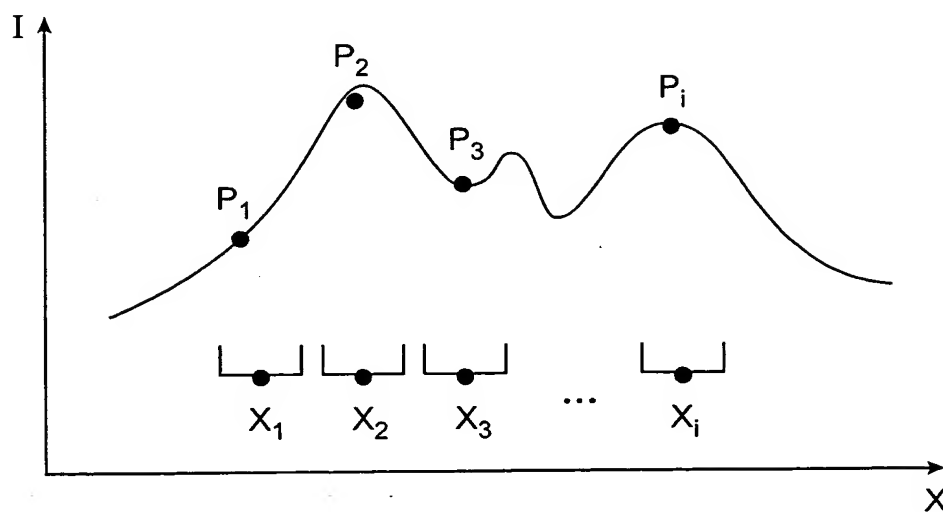


FIG. 8

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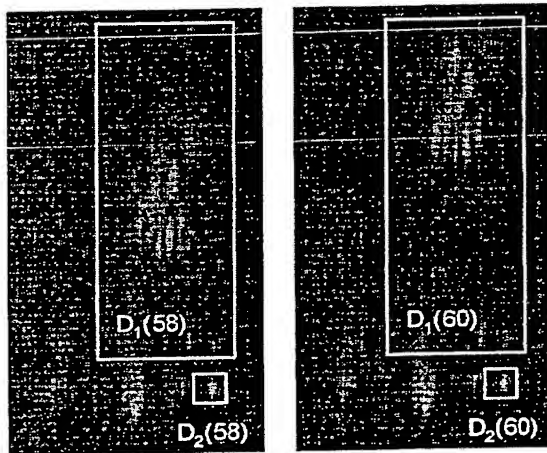


FIG. 9

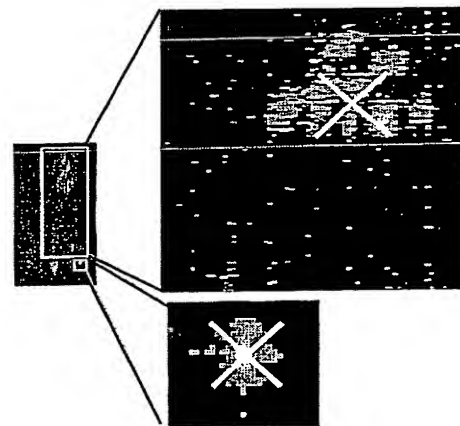


FIG. 10

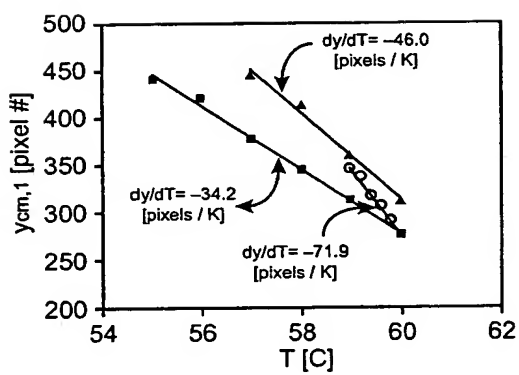


FIG. 11A

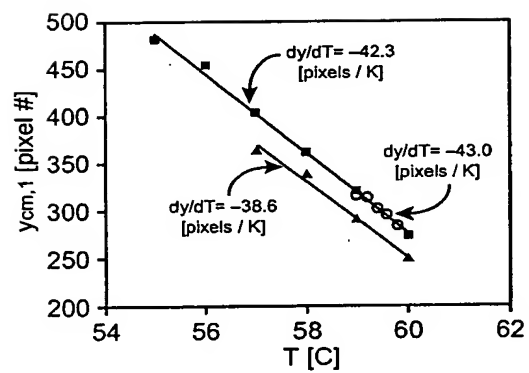


FIG. 11B

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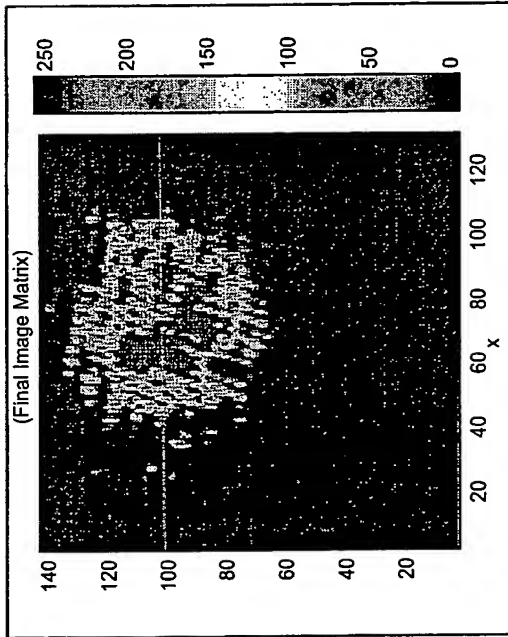


FIG. 13

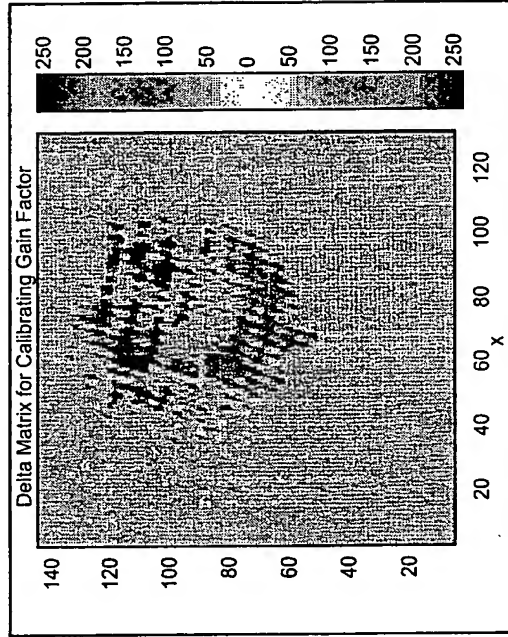


FIG. 15

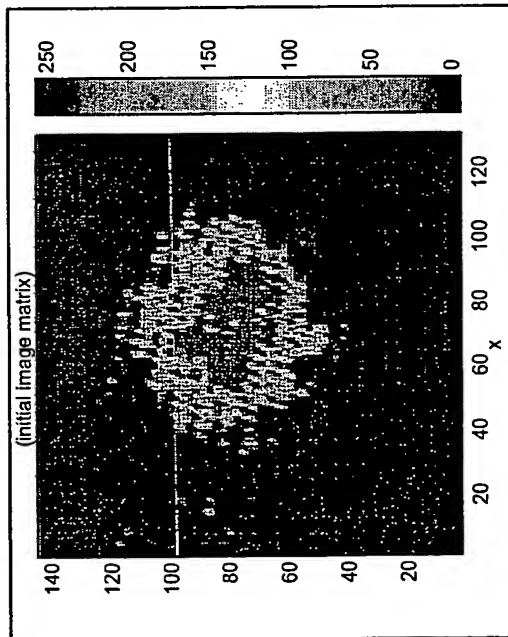


FIG. 12

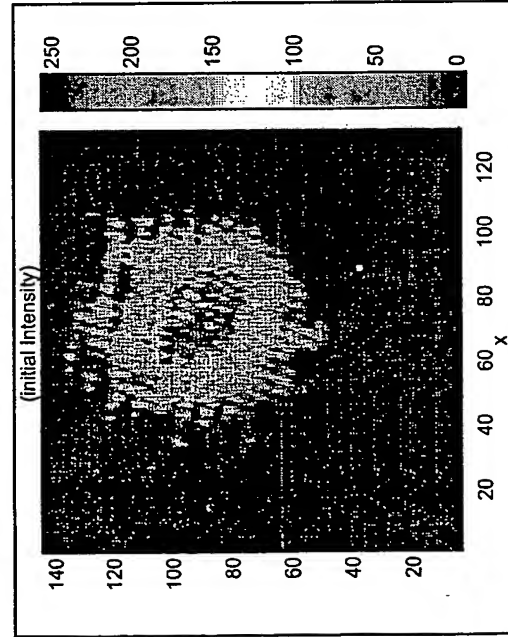


FIG. 14

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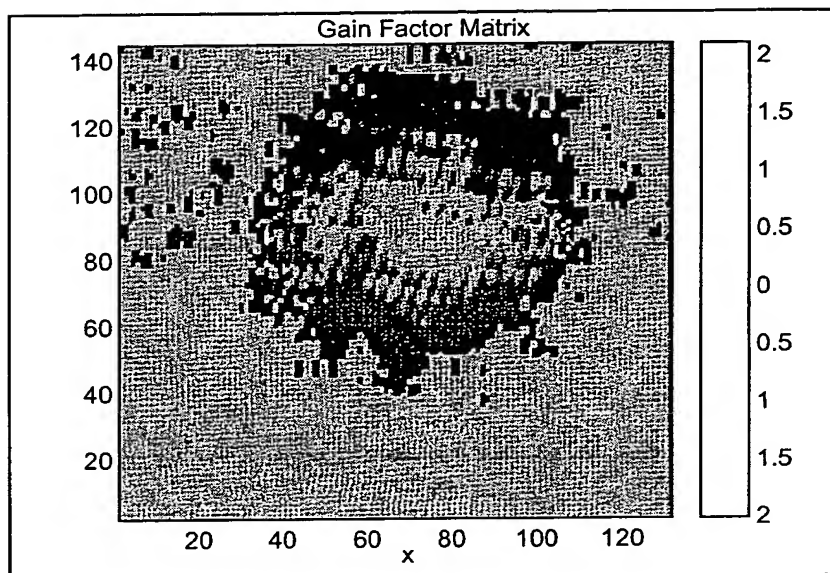


FIG. 16

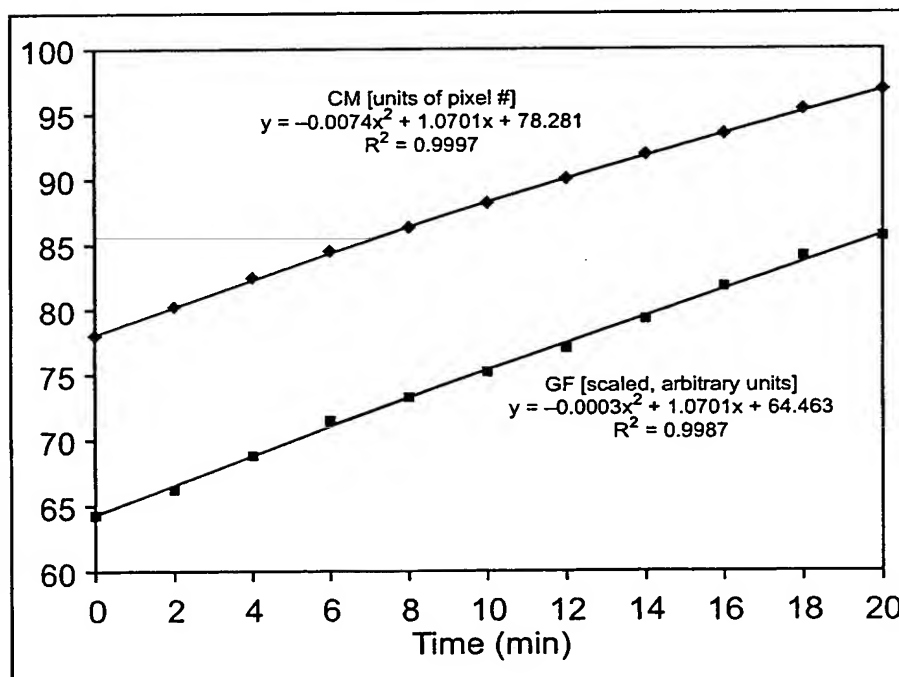


FIG. 17

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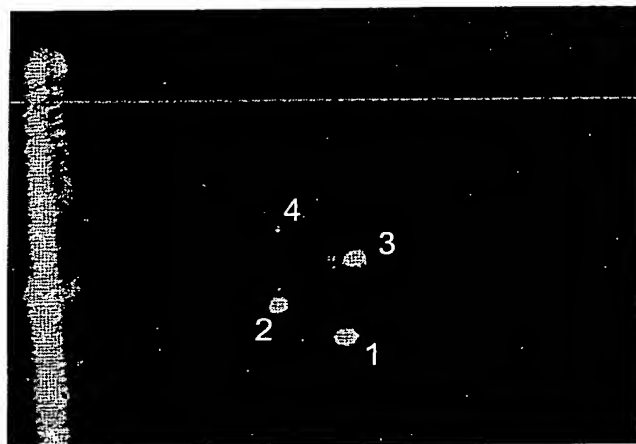


FIG. 18

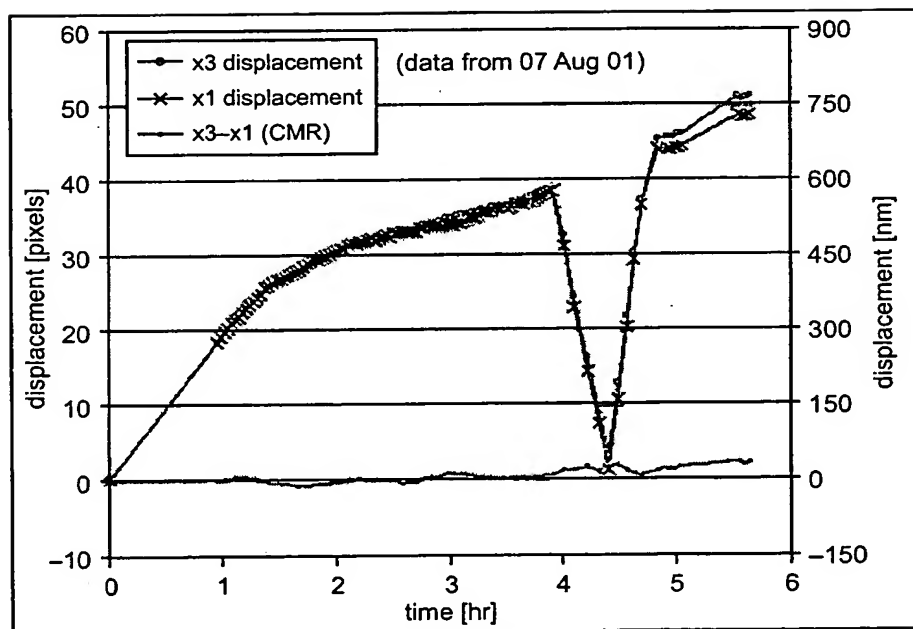


FIG. 19

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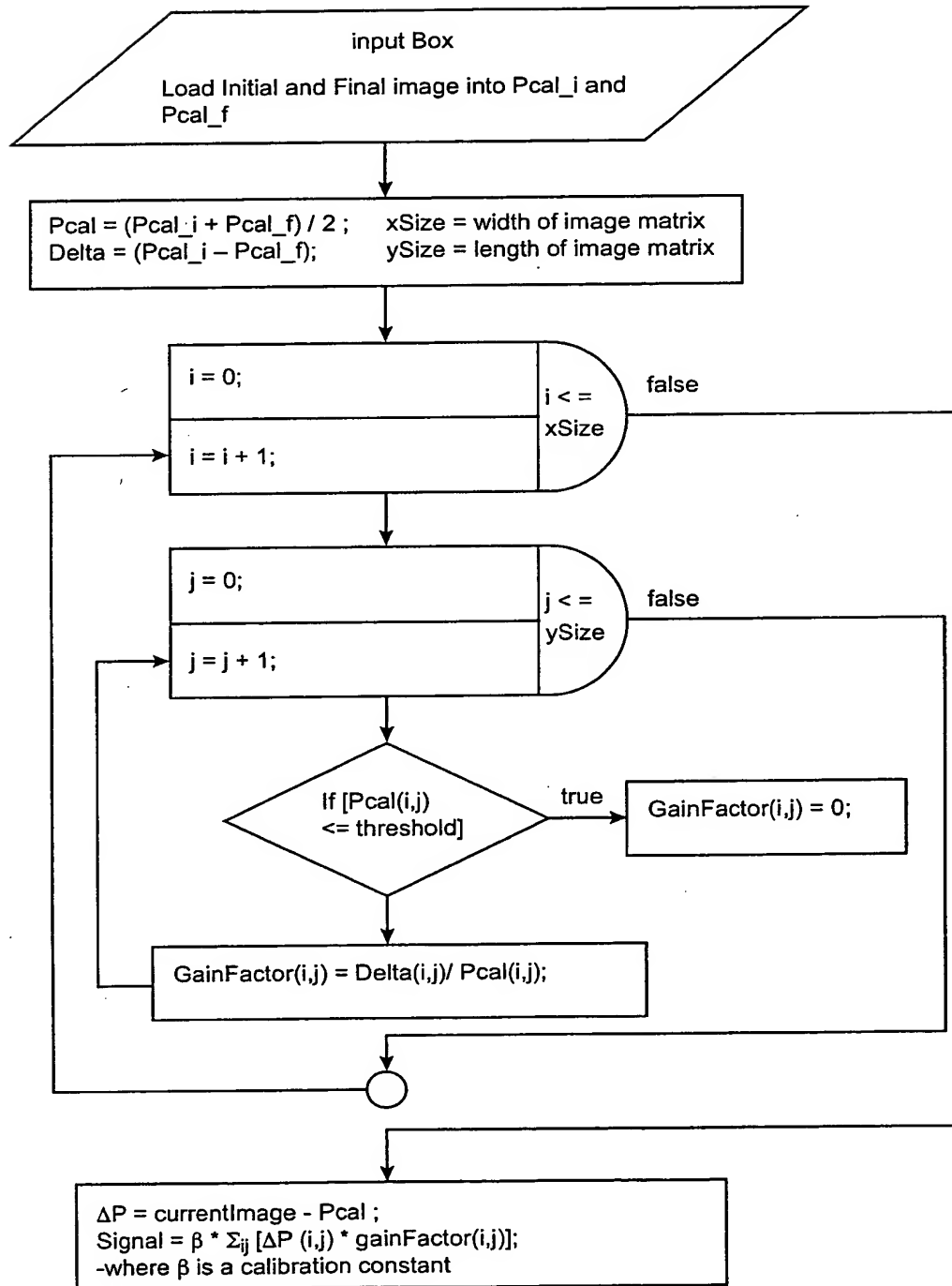


FIG. 20

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PSEUDOCODE

```
% ----- Load in image -----  
  
Pcal_i = load in initial TIF image ;  
Pcal_f = load in final TIF image ;  
Pca= (Pcal_i + Pcal_f) /2;  
Delta = Pcal_i - Pcal_f;  
  
%----- Calibrating the Gain Factor Matrix -----  
  
for i = 1 to width of image Matrix  
    for j = 1 to length of image Matrix  
        if (Pcal(i,j) <= threshold )  
            gainFactor(i,j) = 0;  
        else  
            gainFactor(i,j) = delta(i,j)/ Pcal(i,j);  
        end  
    end  
end  
  
%----- Calculating the signal -----  
  
 $\Delta P = \text{currentImage} - \text{Pcal};$   
Signal =  $\beta * \sum_{ij} [\Delta P(i,j) * \text{gainFactor}(i,j)];$ 
```

FIG. 21

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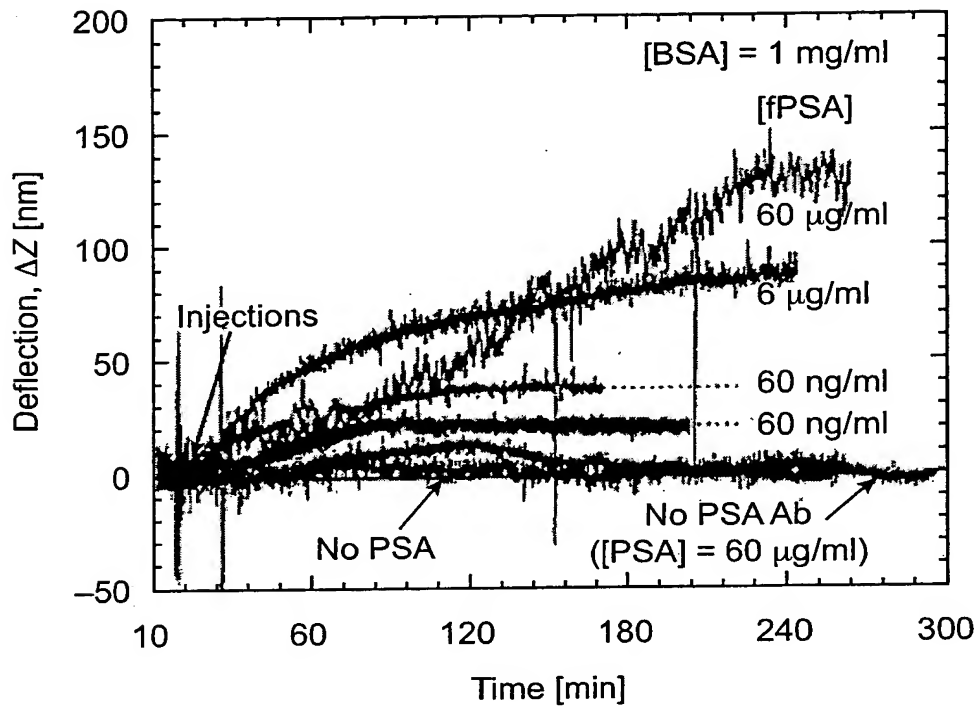


FIG. 22

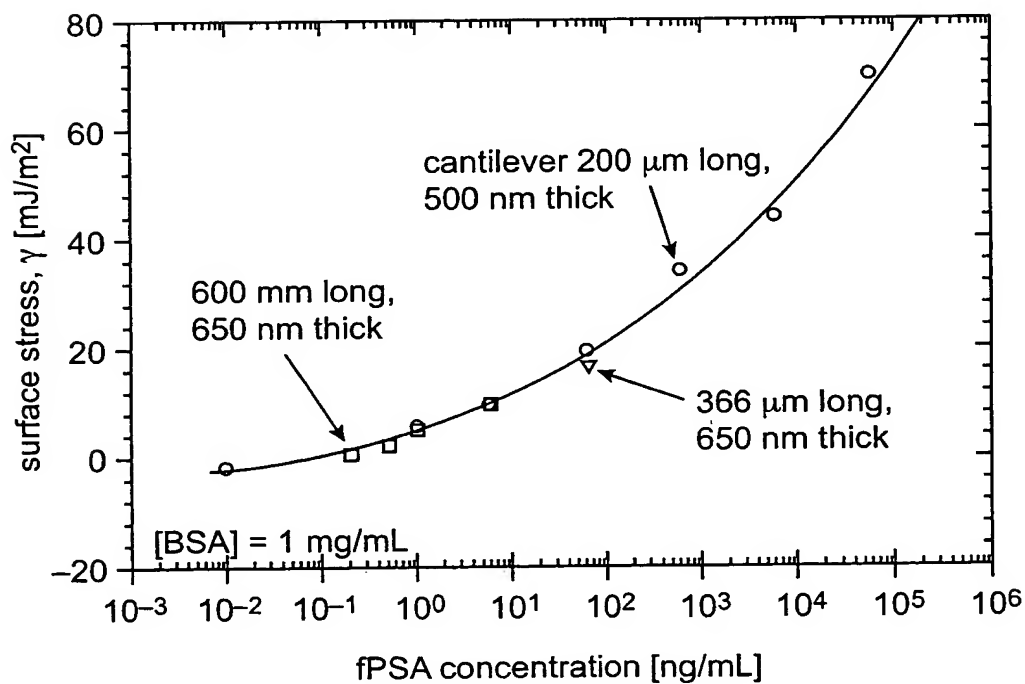


FIG. 23

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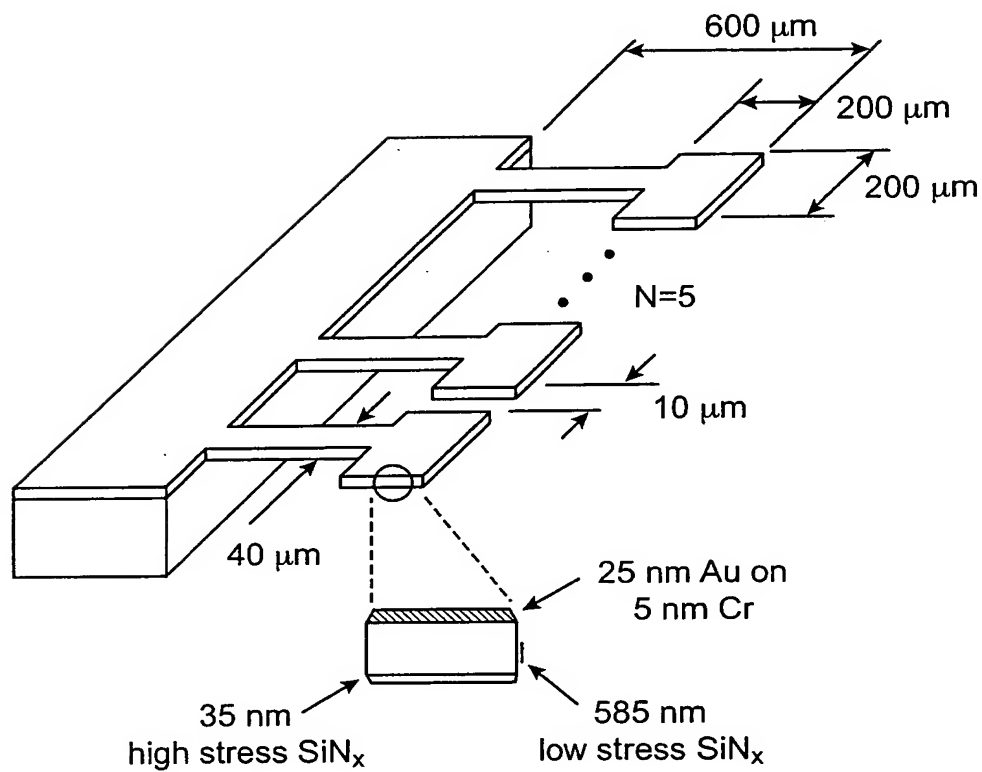


FIG. 24

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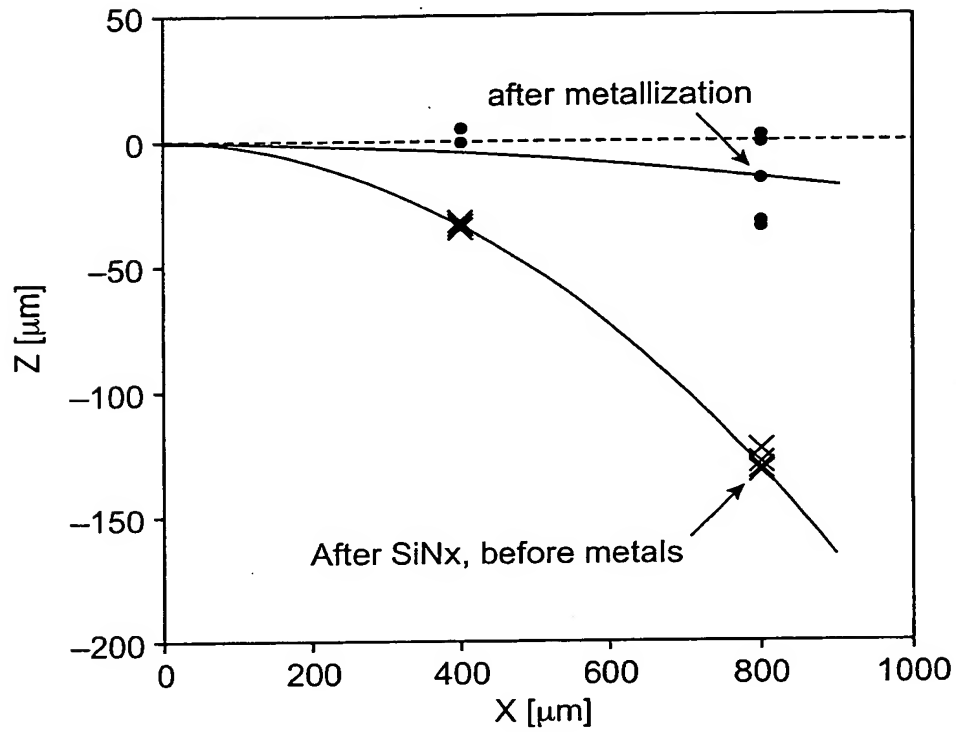


FIG. 25

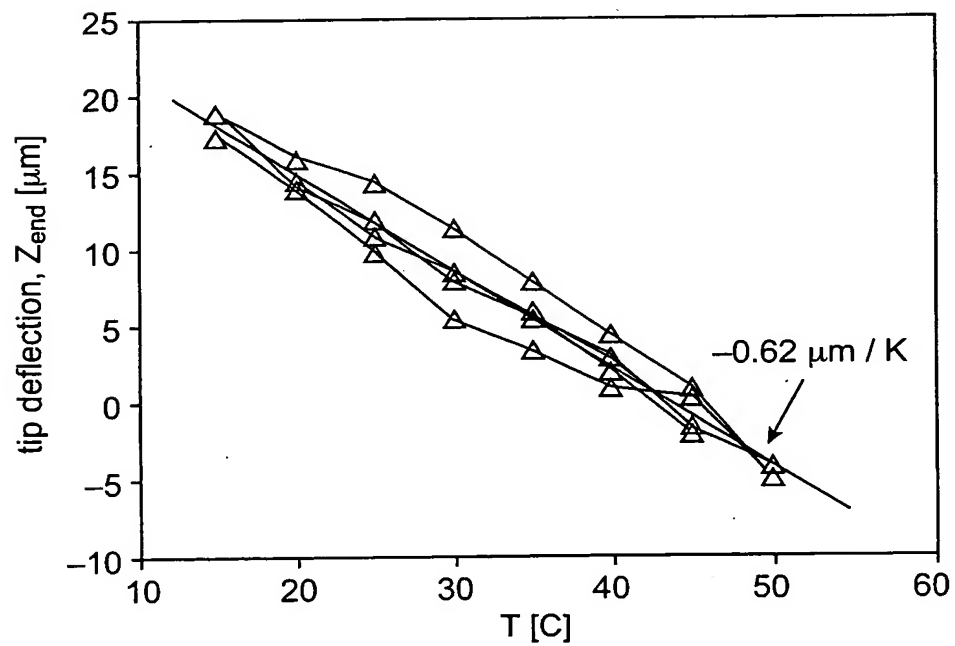


FIG. 26

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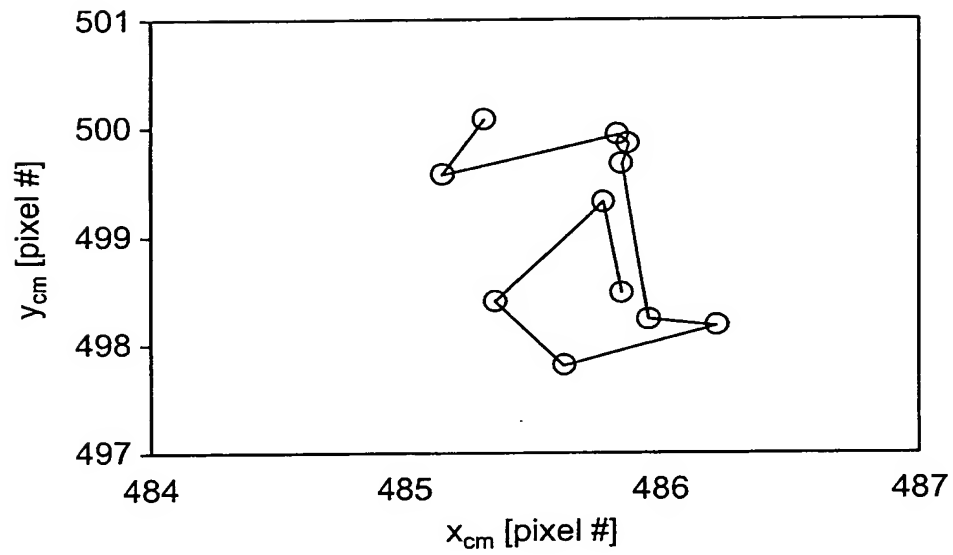


FIG. 27